STATEMENT OF BASIS

Alabama Power Company Theodore Cogeneration Plant

Theodore, Alabama Mobile County 503-8073

This proposed renewal to the Title V Major Source Operating Permit is issued under the provisions of ADEM Admin. Code r. 335-3-16. The above-referenced applicant has applied to renew the existing Title V Permit, which was originally issued on October 11, 2004. The applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans and other documents, which were submitted on April 10, 2009 and are attached hereto or on file with the Air Division of the Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit.

The Theodore Cogeneration Plant is owned and operated by Alabama Power Company and is located in Theodore, Alabama. The Theodore Cogeneration Plant is a cogeneration facility that provides steam to the nearby Degussa Corporation and the INEOS-Phenol, Inc. facility. The Theodore Cogeneration Plant also generates approximately 210 megawatts (MW) of electric power for distribution to Alabama Power customers.

The Theodore Cogeneration Plant was issued its existing Major Source Operating Permit (MSOP) on October 11, 2004, with an expiration date of October 10, 2009. Per ADEM Rule 335-3-16-.12(2), an application for permit renewal shall be submitted at least six (6) months, but not more than eighteen (18) months, before the date of expiration of the permit. Based on this rule, the application for renewal was due to the Department no later than April 11, 2009, but no earlier than April 11, 2008. An application for permit renewal was received by the Department on April 8, 2009. No additional information was deemed necessary for processing of this MSOP.

The significant sources of air pollutants at this facility are the following:

- 170 MW Combined Cycle Unit (Combustion Turbine & Duct Burner)
- Two (2) 220 MMBtu/hr Package Boilers

170 MW Combined Cycle Unit

The combined cycle unit (combustion turbine and duct burner) fires only pipeline natural gas. The combustion turbine and the steam generator have the capability to generate electric power of approximately 170 MW and 40 MW, respectively. The duct burner has a heat input rating of 115 MMBtu/hr and provides the capability to produce additional steam from the heat recovery steam generator (HRSG). The NO_x emissions from the combined cycle combustion turbine are controlled by the use of Selective Catalytic Reduction (SCR).

The combined cycle unit was subject to a Prevention of Significant Deterioration (PSD) Review in which BACT was established for NO_x , CO, VOC, and PM. The combustion turbine is subject to the Federal New Source Performance Standards (NSPS) contained in 40 CFR Part 60, Subpart GG, and the duct burners are subject to NSPS, Subpart Db. The combined cycle unit is also subject to the Acid Rain Program and the Clean Air Interstate Rule (CAIR) Program. The combined cycle unit's expected emissions and the associated standards are listed below.

Emission Standards

Opacity:

 Visible Emissions from the combined cycle/duct burner stack shall not exceed 10%. (ADEM Admin. Code r. 335-3-14-.04(9)(b))

Particulate Matter (PM):

- Particulate emissions from the combined cycle/duct burner stack shall not exceed 0.012 lb/MMBtu and 23.6 lb/hr. (ADEM Admin. Code r. 335-3-14-.04(9)(b)) BACT
- The above emissions limits are BACT limits resulting from a PSD review. (ADEM Admin. Code r. 335-3-14-04)

Sulfur Dioxide (SO₂):

The combined cycle unit is subject to the Acid Rain Regulations. This
unit is not allocated SO₂ allowances under Phase II of the Acid Rain
Program. (ADEM Admin. Code r. 335-3-18-.01 and 40 CFR Part 73)
This unit shall hold sufficient allowances in the unit account to cover
annual SO₂ emissions.

Nitrogen Oxides (NO_x):

- Nitrogen Oxides emissions from the combined cycle/duct burner stack shall not exceed 0.013 lb/MMBtu and 26.8 lbs/hr. (ADEM Admin. Code r. 335-3-14-.04(9)(b)) BACT
- The above emissions limits are BACT limits resulting from a PSD review. (ADEM Admin. Code r. 335-3-14-.04) These emission limits are more stringent than those listed in 40 CFR 60, Subpart GG.

Carbon Monoxide (CO):

- Carbon Monoxide emissions from the combined cycle/duct burner stack shall not exceed 0.086 lb/MMBtu and 176.6 lbs/hr. (ADEM Admin. Code r. 335-3-14-04) BACT
- The above emissions limits are BACT limits resulting from a PSD review. (ADEM Admin. Code r. 335-3-14-04)

Volatile Organic Compounds (VOC):

 Volatile Organic Compound emissions from the combined cycle/duct burner stack shall not exceed 0.016 lb/MMBtu and 31.2 lbs/hr. (ADEM Admin. Code r. 335-3-14-04) BACT The above emissions limits are BACT limits resulting from a PSD review. (ADEM Admin. Code r. 335-3-14-04)

Expected Emissions

Particulate Matter (PM) and Opacity:

 During initial performance testing, the PM emission rate was approximately 0.004 lb/MMBtu while firing the duct burners, which should represent the worst case emission rate. No visible emissions are expected from the unit while firing natural gas.

Sulfur Dioxide (SO₂):

 Natural gas is the primary fuel for this unit, resulting in an emission rate of approximately 0.0006 lb/MMBtu.

Nitrogen Oxides (NO_x):

 The unit is required to monitor NO_x with a Continuous Emissions Monitoring System (CEMS). CEMS data indicates that NO_x emissions from the combined cycle/duct burner are below the permitted emission limits. During the 2009 stack test for the unit, the NO_x emissions were 0.003 lb/MMBtu for the combined cycle unit, which is below the permit limits.

Carbon Monoxide (CO):

 During the initial compliance testing, the CO emission rates from the unit were below the permitted allowable emissions limits. The CO emission rates for the combined cycle unit were 0.005 lb/MMBtu, and 9.7 lb/hr.

Volatile Organic Compounds (VOC):

 During initial compliance testing, the VOC emission rates from the combined cycle unit were below the permitted allowable emissions limits. The VOC emission rates for the combined unit were approximately 0.0001 lb/MMBtu, and 0.24 lb/hr.

Periodic Monitoring

Particulate Matter (PM) and Opacity:

 Based on the low expected levels of emissions as compared to the regulatory allowable emission limits, periodic monitoring of opacity and particulate matter emissions is not considered necessary.

Sulfur Dioxide (SO₂):

There are no emissions limits for SO₂ for this unit. This unit is not allocated annual SO₂ allowances through the Acid Rain Program. However, they must hold enough allowances to cover their annual SO₂ emissions. The provisions in 40 CFR 75 are utilized to track

annual SO2 emissions.

Nitrogen Oxides (NO_x):

This unit is required by 40 CFR Part 75 to maintain and operate a NO_x Continuous Emissions Monitoring System (CEMS). The NOx CEMS will be utilized for periodic monitoring of NO_x emissions.

Carbon Monoxide (CO) and Volatile Organic Compounds (VOC):

 Based on the low expected levels of emissions as compared to the regulatory allowable emission limits, periodic monitoring of CO and VOC emissions is not considered necessary.

Compliance Assurance Monitoring (CAM)

The only pollutant subject to Compliance Assurance Monitoring (CAM) is NO_x since the unit is utilizing a control device, SCR, to meet an applicable limit, and the pre-controlled potential NO_x emissions from the unit are greater than 100 TPY. Even though other pollutants' potential emissions are greater than the respective major source threshold, no control devices are used to meet any applicable limitations; therefore, CAM does not apply to those pollutants.

This unit is required by 40 CFR Part 75 to maintain and operate a NO_x Continuous Emissions Monitoring System (CEMS). The CEMS will also serve as the compliance assurance monitoring for NOx. Details of the CAM Plan are attached to this document.

Two (2) 220 MMBtu/hr Package Boilers

The two (2) 220 MMBtu/hr Package Boiler are fired by natural gas only. These boilers are normally used for backup purposes to ensure adequate steam supply to the nearby Degussa Corporation and INEOS-Phenol, Inc. facilities.

These units were subject to a Prevention of Significant Deterioration (PSD) Review in which BACT was established for NO_x , CO, VOC, and PM. The boilers are also subject to the Federal New Source Performance Standards (NSPS) contained in 40 CFR Part 60, Subpart Db. The expected emissions and the associated standards for each of the two (2) 220 MMBtu/hr package boilers are listed below.

Emission Standards

Opacity:

Visible Emissions shall not exceed 15%. (ADEM Admin. Code r. 335-3-14-.04)

Particulate Matter (PM):

Particulate matter emissions shall not exceed 0.02 lb/MMBtu and 1.1 lb/hr when operating at a heat input less than 55 MMBtu/hr, or 0.008 lb/MMBtu and 1.7 lb/hr when operating at a heat input greater than or

- equal to 55 MMBtu/hr. (ADEM Admin. Code r. 335-3-14-.04) BACT
- The above emissions limits are BACT limits resulting from a PSD review. (ADEM Admin. Code r. 335-3-14-04)

Nitrogen Oxides (NO_x):

- Nitrogen Oxide emissions shall not exceed 0.11 lb/MMBtu and 6.1 lb/hr when operating at a heat input less than 55 MMBtu/hr, or 0.053 lb/MMBtu and 11.7 lb/hr when operating at a heat input greater than or equal to 55 MMBtu/hr. (ADEM Admin Code r. 335-3-14-.04(9)(b)) BACT
- The above emissions limits are BACT limits resulting from a PSD review. (ADEM Admin. Code r. 335-3-14-04) These emission limits are more stringent than those listed in 40 CFR 60, Subpart Db. For this unit, the Subpart Db limit is 0.20 lb/MMBtu while burning natural gas.

Carbon Monoxide (CO):

- Carbon Monoxide emissions shall not exceed 0.32 lb/MMBtu & 17.6 lb/hr when operating at a heat input less than 55 MMBtu/hr or 0.165 lb/MMBtu and 36.3 lb/hr when operating at a heat input of greater than or equal to 55 MMBtu/hr. (ADEM Admin. Code r. 335-3-14-04) BACT
- The above emissions limits are BACT limits resulting from a PSD review. (ADEM Admin. Code r. 335-3-14-04)

Volatile Organic Compounds (VOC):

- Volatile Organic Compound emissions shall not exceed 0.02 lb/MMBtu & 1.1 lb/hr when operating at a heat input less than 55 MMBtu/hr, or 0.005 lb/MMBtu & 1.1 lb/hr when operating at a heat input greater than or equal to 55 MMBtu/hr. (ADEM Admin. Code r. 335-3-14-04) BACT
- The above emissions limits are BACT limits resulting from a PSD review. (ADEM Admin. Code r. 335-3-14-04)

Expected Emissions

Particulate Matter (PM) and Opacity:

 During initial performance testing, the PM emission rate was as follows:

Operating Condition (MMBtu/hr)	PM (lb/MMBtu)	PM (lb/hr)
PB1 ≥ 55	0.0032	0.76
PB1 < 55	0.0026	0.10
PB2 ≥ 55	0.0024	0.63
PB2 < 55	0.0037	0.17

No visible emissions are expected from the unit while firing natural gas.

Sulfur Dioxide (SO₂):

 Natural gas is the primary fuel for this unit; resulting in an emission rate of approximately 0.0006 lb/MMBtu.

Nitrogen Oxides (NO_x):

 These units are required to monitor NO_x with a Continuous Emissions Monitoring System (CEMS). CEMS data indicates that NO_x emissions from the two (2) 220 MMBtu/hr Package Boilers are below the permitted emission limits. During the initial compliance testing for these units, the NOx emissions were as follows:

Operating Condition (MMBtu/hr)	NO _x (lb/MMBtu)	NO _x (lb/hr)
PB1 ≥ 55	0.029	7.1
PB1 < 55	0.041	1.27
PB2 ≥ 55	0.044	11.25
PB2 < 55	0.064	3.4

Carbon Monoxide (CO):

 During the initial compliance testing, the CO emission rates from the unit were below the permitted allowable emissions limits. The following is the emission rates indicated by the initial performance testing:

Operating Condition (MMBtu/hr)	CO (lb/MMBtu)	CO (lb/hr)
PB1 ≥ 55	0.072	17.7
PB1 < 55	0.078	4.08
PB2 ≥ 55	0.028	6.84
PB2 < 55	0.045	2.4

Volatile Organic Compounds (VOC):

• During initial compliance testing, the VOC emission rates from the unit were below the permitted allowable emissions limits. The following is the emission rates indicated by the initial performance testing:

Operating Condition (MMBtu/hr)	VOC (lb/MMBtu)	VOC (lb/hr)
PB1 ≥ 55	0.001	0.2
PB1 < 55	0.0076	0.39
PB2 ≥ 55	0.001	0.40
PB2 < 55	0.0049	.026

Periodic Monitoring

Particulate Matter (PM) and Opacity:

 Based on the low expected levels of emissions as compared to the regulatory allowable emission limits, periodic monitoring of opacity and particulate matter emissions is not considered necessary.

Sulfur Dioxide (SO₂):

 Based on natural gas being the exclusive fuel for the boilers and the low expected SO₂ emissions, no periodic monitoring of SO₂ emissions is considered necessary.

Nitrogen Oxides (NO_x):

The NO_x emission rate from these units shall be monitored by a NO_x Continuous Emissions Monitoring System (CEMS). The NO_x emission rate shall be monitored on a 30-day rolling average. The NO_x CEMS shall be maintained and certified using the procedures of 40 CFR 60.

Carbon Monoxide (CO) and Volatile Organic Compounds (VOC):

 Based on the low expected levels of emissions as compared to the regulatory allowable emission limits, periodic monitoring of CO and VOC emissions is not considered necessary.

Compliance Assurance Monitoring (CAM)

The only pollutant subject to Compliance Assurance Monitoring (CAM) is NO_x since these units each utilize a control device, Flue Gas Recirculation (FGR), to meet an applicable limit, and the pre-controlled potential NO_x emissions from each unit is greater than 100 TPY. Even though other pollutants' potential emissions are greater than the respective major source threshold, no control devices are used to meet any applicable limitations; therefore, CAM does not apply to those pollutants.

This unit is required by 40 CFR 60 Subpart Db to maintain and operate a NO_x Continuous Emissions Monitoring System (CEMS). The CEMS will also serve as the compliance assurance monitoring for NOx. Details of the CAM Plan are attached to this document.

Adam G. Crocker Energy Branch

Air Division

January 26, 2011

Date





MAJOR SOURCE OPERATING PERMIT

Permitee: Alabama Power Company

Facility Name: Theodore Cogeneration Plant

Facility No.: 503-8073

Location: Theodore, Mobile County, Alabama

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, as amended, <u>Ala. Code</u> 1975, §§22-28-1 to 22-28-23 (2006 Rplc. Vol.) (the "AAPCA") and the Alabama Environmental Management Act, as amended, <u>Ala. Code</u> 1975, §§22-22A-1 to 22-22A-15, (2006 Rplc. Vol.) and rules and regulations adopted thereunder, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

Pursuant to the Clean Air Act of 1990, all conditions of this permit are federally enforceable by EPA, the Alabama Department of Environmental Management, and citizens in general. Those provisions which are not required under the Clean Air Act of 1990 are considered to be state permit provisions and are not federally enforceable by EPA and citizens in general. Those provisions are contained in separate sections of this permit.

Issuance Date: DRAFT

Expiration Date:

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ACID RAIN PERMITAT	TACHED
CAIR PERMITAT	TACHED

Fed	erally	Enforceable Provisos	Regulations	
1.	Tra	nsfer		
	othe of ea	s permit is not transferable, whether by operation of law or erwise, either from one location to another, from one piece quipment to another, or from one person to another, except provided in Rule 335-3-1613(1)(a)5.	Rule 335-3-1602(6)	
2.	Ren	ewals		
	six (application for permit renewal shall be submitted at least 6) months, but not more than eighteen (18) months, before date of expiration of this permit.	Rule 335-3-1612(2)	
	oper com	source for which this permit is issued shall lose its right to rate upon the expiration of this permit unless a timely and plete renewal application has been submitted within the constraints listed in the previous paragraph.		
3.	Seve	erability Clause		
	if an or p unco judg of the secti phra	provisions of this permit are declared to be severable and by section, paragraph, subparagraph, subdivision, clause, hrase of this permit shall be adjudged to be invalid or constitutional by any court of competent jurisdiction, the ment shall not affect, impair, or invalidate the remainder his permit, but shall be confined in its operation to the on, paragraph, subparagraph, subdivisions, clause, or use of this permit that shall be directly involved in the roversy in which such judgment shall have been rendered.	Rule 335-3-1605(e)	
4.	Com	pliance		
	(a)	The permittee shall comply with all conditions of ADEM Admin. Code 335-3. Noncompliance with this permit will constitute a violation of the Clean Air Act of 1990 and ADEM Admin. Code 335-3 and may result in an enforcement action; including but not limited to, permit termination, revocation and reissuance, or modification; or denial of a permit renewal application by the permittee.	Rule 335-3-1605(f)	
	(b)	The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.	Rule 335-3-1605(g)	

Fed	erally Enforceable Provisos	Regulations
5.	Termination for Cause	
	This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance will not stay any permit condition.	
6.	Property Rights	
	The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.	Rule 335-3-1605(i)
7.	Submission of Information	
	The permittee must submit to the Department, within 30 days or for such other reasonable time as the Department may set, any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. Upon receiving a specific request, the permittee shall also furnish to the Department copies of records required to be kept by this permit.	Rule 335-3-1605(j)
8.	Economic Incentives, Marketable Permits, and Emissions Trading	
	No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.	Rule 335-3-1605(k)
9.	Certification of Truth, Accuracy, and Completeness:	
	Any application form, report, test data, monitoring data, or compliance certification submitted pursuant to this permit shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.	Rule 335-3-1607(a)
10.	Inspection and Entry	
	Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized representatives of the Alabama Department of Environmental	Rule 335-3-1607(b)

Fede	erally	Enforceable Provisos	Regulations
**********	Mar	agement and EPA to conduct the following:	
	(a)	Enter upon the permittee's premises where a source is located or emissions-related activity is conducted, or where records must be kept pursuant to the conditions of this permit;	
	(b)	Review and/or copy, at reasonable times, any records that must be kept pursuant to the conditions of this permit;	
	(c)	Inspect, at reasonable times, this facility's equipment (including monitoring equipment and air pollution control equipment), practices, or operations regulated or required pursuant to this permit;	
	(d)	Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or other applicable requirements.	
11.	Com	pliance Provisions	
	(a)	The permittee shall continue to comply with the applicable requirements with which the company has certified that it is already in compliance.	Rule 335-3-1607(c)
	(b)	The permittee shall comply in a timely manner with applicable requirements that become effective during the term of this permit.	
12.	Com	pliance Certification	
	Nove Septe accor	ompliance certification shall be submitted yearly by mber 30 covering the period from October 1 through ember 30 unless more frequent periods are specified eding to the specific rule governing the source or required to be Department.	Rule 335-3-1607(e)
	(a)	The compliance certification shall include the following:	
	-	(1) The identification of each term or condition of this permit that is the basis of the certification;	
		(2) The compliance status;	
		(3) The method(s) used for determining the compliance	

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		status of the source, currently and over the reporting period consistent with Rule 335-3-1605(c) (Monitoring and Recordkeeping Requirements);	
		(4) Whether the method(s) or other means used to assure compliance provided continuous or intermittent data;	
		(5) Such other facts as the Department may require to determine the compliance status of the source;	
	(p)	The compliance certification shall be submitted to:	
	Ala	abama Department of Environmental Management Air Division P.O. Box 301463 Montgomery, AL 36130-1463	
		and to:	
		Air and EPCRA Enforcement Branch EPA Region IV 61 Forsyth Street, SW Atlanta, GA 30303	
l 3 .	Reop	ening for Cause	
	Unde reope	r any of the following circumstances, this permit will be ned prior to the expiration of the permit:	Rule 335-3-1613(5)
	(a)	Additional applicable requirements under the Clean Air Act of 1990 become applicable to the permittee with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire.	
	(b)	Additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into this permit.	
	(c)	The Department or EPA determines that this permit	

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		contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.	
	(d)	The Administrator or the Department determines that this permit must be revised or revoked to assure compliance with the applicable requirements.	
14.	<u>Add</u>	itional Rules and Regulations	
	exist and	permit is issued on the basis of Rules and Regulations ting on the date of issuance. In the event additional Rules Regulations are adopted, it shall be the permit holder's onsibility to comply with such rules.	§22-28-16(d), Code of Alabama 1975, a amended
15.	Equ	ipment Maintenance or Breakdown	
	(a)	Unless otherwise specified in the unit-specific provisos of this permit, in the case of shutdown of air pollution control equipment (which operates pursuant to any permit issued by the Director) for necessary scheduled maintenance, the intent to shut down such equipment shall be reported to the Director at least twenty-four (24) hours prior to the planned shutdown, unless such shutdown is accompanied by the shutdown of the source which such equipment is intended to control. Such prior notice shall include, but is not limited to the following:	Rule 335-3-1- .07(1),(2)
	(1)	Identification of the specific facility to be taken out of service as well as its location and permit number;	
	(2)	The expected length of time that the air pollution control equipment will be out of service;	
	(3)	The nature and quantity of emissions of air contaminants likely to occur during the shutdown period;	
	(4)	Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of the shutdown period;	
	(5)	The reasons that it would be impossible or impractical to shut down the source operation during the	

Fede	erally l	Enforceable Provisos	Regulations
		maintenance period.	
	(b)	Unless otherwise specified in the unit-specific provisos of this permit, in the event that there is a breakdown of equipment or upset of process in such a manner as to cause, or is expected to cause, increased emissions of air contaminants which are above an applicable standard, the person responsible for such equipment shall notify the Director within 24 hours or the next working day and provide a statement giving all pertinent facts, including the estimated duration of the breakdown. The Director will be notified when the breakdown has been corrected.	
16.	Open	ration of Capture and Control Devices	
	for voperation operations the a	ss otherwise specified in the unit-specific provisos of this ait, all air pollution control devices and capture systems which this permit is issued shall be maintained and ated at all times in a manner so as to minimize the sions of air contaminants. Procedures for ensuring that above equipment is properly operated and maintained so minimize the emission of air contaminants shall be olished.	§22-28-16(d), <u>Code</u> of Alabama 1975, as amended
17 .	Obno	oxious Odors	
	obno by A emiss Depa	permit is issued with the condition that, should xious odors arising from the plant operations be verified ir Division inspectors, measures to abate the odorous sions shall be taken upon a determination by the Alabama rtment of Environmental Management that these ures are technically and economically feasible.	Rule 335-3-108
18.	Fugit	tive Dust	
	(a)	Reasonable precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.	Rule 335-3-402
	(b)	Plant or haul roads and grounds will be maintained in the following manner so that dust will not become airborne:	
		(1) By the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular	

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		traffic;	
	(2)	By reducing the speed of vehicular traffic to a point below that at which dust emissions are created;	
	(3)	By paving;	
	(4)	By the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions; or	
	(5)	By any combination of the above methods which results in the prevention of dust becoming airborne from the road surface.	
	to a road emp or a	uld one, or a combination, of the above methods fail dequately reduce airborne dust from plant or haulds and grounds, alternative methods shall be aloyed, either exclusively or in combination with one ll of the above control techniques, so that dust will become airborne. Alternative methods shall be	
		roved by the Department prior to utilization.	
<u>Ad</u>	appı		
An	appi Iditions ny modif odificatio	roved by the Department prior to utilization.	Rule 335-3-1613 and .14
An mo	appr Iditions ny modification 1.	roved by the Department prior to utilization. and Revisions fications to this source shall comply with the	
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		(5) The results of all analyses; and	
	(6)	The operating conditions that existed at the time of sampling or measurement.	
	(b)	Retention of records of all required monitoring data and support information of the source for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation and copies of all reports required by the permit.	
21.	Rep	orting Requirements	
	(a)	Reports to the Department of any required monitoring shall be submitted at least every 6 months. All instances of deviations from permit requirements must be clearly identified in said reports. All required reports must be certified by a responsible official consistent with Rule 335-3-1604(9).	Rule 335-3-16- .05(c)3.
	(b)	Deviations from permit requirements shall be reported within 48 hours or 2 working days of such deviations, including those attributable to upset conditions as defined in the permit. The report will include the probable cause of said deviations, and any corrective actions or preventive measures that were taken.	
22.	Emis	sion Testing Requirements	
	(a)	Each point of emission which requires testing will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.	Rule 335-3-105(3) and Rule 335-3-104(1)
	(b)	The Air Division must be notified in writing at least 10 days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.	
	(c)	To avoid problems concerning testing methods and procedures, the following shall be included with the	

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		notification letter:	
	(1)	The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.	
	(2)	A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedures requires probe cleaning).	
	(3)	A description of the process(es) to be tested including the feed rate, any operating parameters used to control or influence the operations, and the rated capacity.	
	. (4)	A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.	
	(d)	A pretest meeting may be held at the request of the source owner or the Air Division. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis.	Rule 335-3-104
	(e)	All test reports must be submitted to the Air Division within 30 days of the actual completion of the test unless an extension of time is specifically approved by the Air Division.	
23.	Paym	ent of Emission Fees	
	Annua	al emission fees shall be remitted each year according to e schedule in ADEM Admin. Code R. 335-1-704.	Rule 335-1-704
24.	Other	Reporting and Testing Requirements	
	analys require contro	ission of other reports regarding monitoring records, fuel ses, operating rates, and equipment malfunctions may be sed as authorized in the Department's air pollution I rules and regulations. The Department may require on testing at any time.	Rule 335-3-104(1)

Fede	rally E	nforceable Provisos	Regulations
25.	Title	VI Requirements (Refrigerants)	
	includ Class 82, St maint person	facility having appliances or refrigeration equipment, ling air conditioning equipment, which use Class I or II ozone-depleting substances as listed in 40 CFR Part abpart A, Appendices A and B, shall service, repair, and ain such equipment according to the work practices, and certification requirements, and certified recycling ecovery equipment specified in 40 CFR Part 82, Subpart	335-3-1605(a
	I or Caservica	rson shall knowingly vent or otherwise release any Class lass II substance into the environment during the repair, ing, maintenance, or disposal of any device except as led in 40 CFR Part 82, Subpart F.	
	record	esponsible official shall comply with all reporting and keeping requirements of 40 CFR 82.166. Reports shall omitted to the US EPA and the Department as required.	
26.	Chem	ical Accidental Prevention Provisions	
	in a p	emical listed in Table 1 of 40 CFR Part 68.130 is present rocess in quantities greater than the threshold quantity in Table 1, then:	40 CFR Part 68
	(a)	The owner or operator shall comply with the provisions in 40 CFR Part 68.	
	(b)	The owner or operator shall submit one of the following:	
		(1) A compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR Part 68 § 68.10(a) or,	
		(2) A certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of the Risk Management Plan.	
7.	Displa	y of Permit	
	the sit	ermit shall be kept under file or on display at all times at the where the facility for which the permit is issued is and will make the permit readily available for	Rule 335-3-1401(1)(d)

located and will make the permit readily available for

Fede	erally Enforceable Provisos	Regulations
	inspection by any or all persons who may request to see it.	
28.	Circumvention	
	No person shall cause or permit the installation or use of any device or any means which, without resulting in the reduction in the total amount of air contaminant emitted, conceals or dilutes any emission of air contaminant which would otherwise violate the Division 3 rules and regulations.	Rule 335-3-110
29.	Visible Emissions	
	Unless otherwise specified in the Unit Specific provisos of this permit, any source of particulate emissions shall not discharge more than one 6-minute average opacity greater than 20% in any 60-minute period. At no time shall any source discharge a 6-minute average opacity of particulate emissions greater than 40%. Opacity will be determined by 40 CFR Part 60, Appendix A, Method 9, unless otherwise specified in the Unit Specific provisos of this permit.	Rule 335-3-401(1)
30.	Fuel-Burning Equipment	
	Unless otherwise specified in the Unit Specific provisos of this permit, no fuel-burning equipment may discharge particulate emissions in excess of the emissions specified in Part 335-3-403.	Rule 335-3-403
	Unless otherwise specified in the Unit Specific provisos of this permit, no fuel-burning equipment may discharge sulfur dioxide emissions in excess of the emissions specified in Part 335-3-501.	Rule 335-3-501
31.	Process Industries - General	
	Unless otherwise specified in the Unit Specific provisos of this permit, no process may discharge particulate emissions in excess of the emissions specified in Part 335-3-404.	Rule 335-3-404
32.	Averaging Time for Emission Limits	
	Unless otherwise specified in the permit, the averaging time for the emission limits listed in this permit shall be the nominal time required by the specific test method.	Rule 335-3-105

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Con- appl requ unit attac				
(a)	Ope	ration of Approved Monitoring	40 CFR 64.7	
	(1)	Commencement of operation. The owner or operator shall conduct the monitoring required under this section and detailed in the unit specific provisos and CAM appendix of this permit (if required) upon issuance of the permit, or by such later date specified in the permit pursuant to §64.6(d).		
5.	(2)	Proper maintenance. At all times, the owner or operator shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.		
	(3)	Continued operation. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless		

- (4) Response to excursions or exceedances.
 - (a) Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing response shall include emissions. The minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
 - (b) Determination of whether the owner or operator has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.
- (5) Documentation of need for improved monitoring. After approval of monitoring under this part, if the owner or operator identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the

rally	Enfor	ceable Provisos	Regulations
		results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the owner or operator shall promptly notify the Department and, if necessary, submit a proposed modification to the permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.	
(b)	Qua	ality Improvement Plan (QIP) Requirements	40 CFR 64.8
	(1)	Based on the results of a determination made under Section 33(a)(4)(b) above, the Administrator or the permitting authority may require the owner or operator to develop and implement a QIP. Consistent with 40 CFR §64.6(c)(3), the permit may specify an appropriate threshold, such as an accumulation of exceedances or excursions exceeding 5 percent duration of a pollutant-specific emissions unit's operating time for a reporting period, for requiring the implementation of a QIP. The threshold may be set at a higher or lower percent or may rely on other criteria for purposes of indicating whether a pollutant-specific emissions unit is being maintained and operated in a manner consistent with good air pollution control practices.	
	(2)	Elements of a QIP:	
		A. The owner or operator shall maintain a written QIP, if required, and have it available for inspection.	
		B. The plan initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the owner or operator shall modify the plan to include procedures for conducting one or more of the following actions, as appropriate:	
		(i) Improved preventive maintenance practices.	

Federally Er	nforceable Provisos	Regulations
	(ii) Process operation changes.	
	(iii) Appropriate improvements to control methods.	
	(iv) Other steps appropriate to correct control performance.	
	(v) More frequent or improved monitoring (only in conjunction with one or more steps under paragraphs (2)(b)(i) through (iv) above).	
	(3) If a QIP is required, the owner or operator shall develop and implement a QIP as expeditiously as practicable and shall notify the Department if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.	
	(4) Following implementation of a QIP, upon any subsequent determination pursuant to Section 33(a)(4)(b) above, the Department may require that an owner or operator make reasonable changes to the QIP if the QIP is found to have:	
	A. Failed to address the cause of the control device performance problems; or	
	B. Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.	
	(5) Implementation of a QIP shall not excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.	
(c)	Reporting and Recordkeeping Requirements	40 CFR 64.9

Federally Enforce	eable Provisos	Regulations
(1)	General reporting requirements	
	A. On and after the date specified in Section 33(a)(1) above by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with ADEM Admin. Code r. 335-3-1605(c)3.	
	B. A report for monitoring under this part shall include, at a minimum, the information required under ADEM Admin. Code r. 335-3-1605(c)3. and the following information, as applicable:	
	(i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;	
	(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and	
	(iii) A description of the actions taken to implement a QIP during the reporting period as specified in Section 33(b) above. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.	
(2)	General recordkeeping requirements.	
	A. The owner or operator shall comply with the recordkeeping requirements specified in ADEM Admin. Code r. 335-3-1605(c)2 The owner or operator shall maintain records of	

owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality

Federally l	Enforce	eable Provisos	Regulations
		improvement plan required pursuant to Section 33(b) above and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this part (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).	
		B. Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.	
(d)	Savir	ngs Provisions	40 CFR 64.10
	(1)	Nothing in this part shall:	
		A. Excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act. The requirements of this part shall not be used to justify the approval of monitoring less stringent than the monitoring which is required under separate legal authority and are not intended to establish minimum requirements for the purpose of determining the monitoring to be imposed under separate authority under the Act, including monitoring in permits issued pursuant to title I of the Act. The purpose of this part is to require, as part of the issuance of a permit under title V of the Act, improved or new monitoring at those emissions units where monitoring requirements do not exist or are inadequate to meet the requirements of this part.	

B. Restrict or abrogate the authority of the Department to impose additional or more

Fede	rally E	nforcea	ble Provisos	Regulations
			stringent monitoring, recordkeeping, testing, or reporting requirements on any owner or operator of a source under any provision of the Act, including but not limited to sections 114(a)(1) and 504(b), or state law, as applicable.	
		C	C. Restrict or abrogate the authority of the Department to take any enforcement action under the Act for any violation of an applicable requirement or of any person to take action under section 304 of the Act.	
34.	Emis	ssions In	eventory Reporting Requirements	
	requi shall	irements comply	eet the statewide emissions inventory reporting under 40 CFR 51, Appendix A, the permittee with the reporting requirements under ADEM r. 335-3-115.	Rule 335-3-115
35.	Per	mit Shie	<u>ld</u>	
	(a)	accord that co be dee as of applica	mit shield exists under this operating permit in lance with ADEM Admin. Code 335-3-1610 in ompliance with the conditions of this permit shall med compliance with any applicable requirements the date of permit issuance, provided that such able requirements are included and are cally identified in this operating permit.	Rule 335-3-1610
	(b)	Nothin	ng in this permit shall alter or affect the following:	
		`´´ (The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;	
		` ′	The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;	
		1	The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act; or	
			The ability of EPA to obtain information from a source pursuant to Section 114 of the Act.	

Summary Page for 170 MW Natural Gas Fired Combustion Turbine w/ Natural Gas Fired 115 MMBtu/hr Duct Burner and Heat Recovery Steam Generator

Permitted Operating Schedule: 8760 Hrs/yr

Emission limitations:

Emission Point #	Description	Pollutant	Emission limit	Regulation
001	Combined CT/Duct Burner Exhaust	PM	Combined - 0.012 lb/MMBtu & 23.6 lb/hr	ADEM Admin. Code r. 335-3-1404(9)(b) BACT
001	Combined CT/Duct Burner Exhaust	NOx	Combined – 0.013 lb/MMBtu & 26.8 lb/hr	ADEM Admin. Code r. 335-3-1404(9)(b) BACT
			DB - 0.20 lb/MMBtu & 23 lb/hr	40 CFR Part 60 Subpart Db
001	Combined CT/Duct Burner Exhaust	SO ₂	N/A	N/A
001	Combined CT/Duct Burner Exhaust	CO	Combined – 0.086 lb/MMBtu & 176.6 lb/hr	ADEM Admin. Code r. 335-3-1404(9)(b) BACT
001	Combined CT/Duct Burner Exhaust	VOC	Combined - 0.016 lb/MMBtu & 31.2 lb/hr	ADEM Admin. Code r. 335-3-1404(9)(b) BACT
001	Combined CT/Duct Burner Exhaust	HAPs	N/A	N/A
001	Combined CT/Duct Burner Exhaust	Opacity	10%	ADEM Admin. Code r. 335-3-1404(9)(b) BACT

Provisos for 170 MW Natural Gas Fired Combustion Turbine w/ Natural Gas Fired 115 MMBtu/hr Duct Burner and Heat Recovery Steam Generator

Fe	derally Enforceable Provisos	Regulations
Ар	plicability	
1.	This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-16, "Major Source Operating Permits."	Rule 335-3-16
2.	This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-1404, "Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]."	Rule 335-3-1404
3.	The combustion turbine associated with this unit is subject to	Rule 335-3-1002(33)
	the provisions of ADEM Admin. Code r. 335-3-1002(33), 40 CFR 60 Subpart GG "Standards of Performance for Stationary Gas Turbines."	40 CFR Part 60 Subpart GG
4.	The duct burner associated with this unit is subject to the	Rule 335-3-1002(2)(b)
	provisions of ADEM Admin. Code r. 335-3-1002(2)(b), 40 CFR 60 Subpart Db "Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units."	40 CFR Part 60 Subpart Db
5.	Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions are incorporated as enforceable conditions of this permit.	Rule 335-3-1605(a)2
6.	This unit is subject to the applicable provisions of the Clean Air Interstate Rule found in ADEM Admin. Code r. 335-3-506 through 335-3-514 and 335-3-816 through 335-3-833.	Rules 335-3-506 through 335-3-514 and Rules 335-3-816 through 335-3-833
<u>Em</u>	ission Standards	
1.	Emissions exceeding any allowances that the source lawfully holds under Title IV of the Act or the regulations promulgated thereunder are prohibited.	Rule 335-3-1605(d)
2.	Nitrogen Oxides emissions from the combined combustion turbine/duct burner stack shall not exceed 0.013 lb/MMBtu and 26.8 lbs/hr.	Rule 335-3-1404(9)(b) BACT
3.	Nitrogen Oxides emissions from the duct burner shall not exceed 0.20 lb/MMBtu and 23.0 lbs/hr.	40 CFR 60.44b
4.	Carbon Monoxide emissions from the combined combustion turbine/duct burner stack shall not exceed 0.086 lb/MMBtu and 176.6 lbs/hr.	Rule 335-3-1404(9)(b) BACT
5.	Volatile organic emissions from the combined combustion turbine/duct burner stack shall not exceed 0.016 lb/MMBtu 31.2 lbs/hr.	Rule 335-3-1404(9)(b) BACT

Federally Enforceable Provisos		Regulations
6.	Particulate emissions from the combined turbine/duct burner stack shall not exceed 0.012 lb/MMBtu and 23.6 lb/hr.	Rule 335-3-1404(9)(b) BACT
7.	Visible emissions from the combined turbine/duct burner stack shall not exceed 10% opacity.	Rule 335-3-1404(9)(b) BACT
8.	The emissions standards in Provisos 2 – 7 above apply at all times except during periods of startup, shutdown, and load change.	Rule 335-3-1403(1)(h)
	Startup: The period from when the combustion turbine is started until it reaches 50% load. This period shall be readily identifiable on the load chart recording.	
	Shutdown: The period when the load on the combustion turbine is decreasing from 50% load to when the fuel can be cut off from the unit. This period shall be readily identifiable on the load chart recording.	
	Load Change: A rapid change in the electrical loading of a unit that is readily identifiable on the load chart recording.	
9.	The combustion turbine and duct burner shall fire only natural gas.	Rule 335-3-1404
10.	The owners and operators of each source subject to the Clean Air Interstate Rule (CAIR) shall comply with all applicable provisions of Rules 335-3-506 through 335-3-514 and Rules 335-3-816 through 335-3-833.	Rules 335-3-506 through 335-3-514 and Rules 335-3-816 through 335-3-833
11.	In the absence of CAIR, the owners and operators of each affected source shall comply immediately upon the compliance date of any such rule that replaces or supplements CAIR.	General Provisos 11(b) and 14
Cor	mpliance and Performance Test Methods and Procedures	
1.	Compliance with the Nitrogen Oxides emissions standards for the CT shall be determined by EPA Reference Method 20 as found in Appendix A of 40 CFR 60.	Rule 335-3-105
2.	Compliance with the Nitrogen Oxides emissions standards for the duct burner shall be determined by EPA Reference Method 7 as found in Appendix A of 40 CFR 60.	Rule 335-3-105
3.	Compliance with the Carbon Monoxide emissions standards shall be determined by EPA Reference Method 10 as found in Appendix A of 40 CFR 60.	Rule 335-3-105
4.	Compliance with the Volatile Organic Compounds emissions standards shall be determined by EPA Reference Method 25, 25A, or 25B, as found in Appendix A of 40 CFR 60.	Rule 335-3-105

Federally Enforceable Provisos		Regulations
5.	Compliance with the particulate emissions standards shall be determined by EPA Reference Method 5 or 17, as found in Appendix A of 40 CFR 60.	Rule 335-3-105
6.	Compliance with the opacity standards shall be determined by EPA Reference Method 9 as found in Appendix A of 40 CFR 60.	Rule 335-3-105
Em	nission Monitoring	
1.	This source is subject to the applicable requirements of 40 CFR Part 64, "Compliance Assurance Monitoring" to include the Operation of approved monitoring as detailed in §64.7. This monitoring shall begin upon the issuance of this permit and be conducted in accordance with the attached Appendix.	40 CFR Part 64 – CAM
2.	If the Permittee is required by the Administrator to develop and implement a Quality Improvement Plan (QIP), it shall do so as specified in 40 CFR Part 64.8.	40 CFR Part 64 - CAM
3.	The NOx emission rate from this unit shall be monitored by the NOx Continuous Emissions Monitoring (CEMS). The NOx emission rate shall be monitored on a rolling three-hour	40 CFR Part 75
		Rule 335-3-1605(c)
	average. The NOx CEMS shall be maintained and certified using the procedures of 40 CFR 75.	40 CFR 64 – CAM
<u>Re</u>	cordkeeping and Reporting Requirements	
1.	This source is subject to the applicable requirements of 40 CFR Part 64, "Compliance Assurance Monitoring" to include the Reporting and Recordkeeping Requirements in §64.9.	40 CFR Part 64.9
2.	An excess emissions report for the combined turbine/duct burner stack as defined by 40 CFR Part 60, Subpart A, §60.7(c) and (d), will be submitted to the ADEM within thirty days of the end of each calendar quarter. The report will contain the following format:	Rule 335-3-1605(c) 40 CFR 64.9
	NOx	
	A. Source Operating Time (all times and periods in hours unless otherwise noted)	
	B. Time Monitoring System was Able to Record Source Performance *	
	C. Monitor Availability (%) = $B/A \times 100$	
	D. Total Excess Emission Periods where the CEM data may indicate emissions above standards **(3 hour periods)	
	E. Overall Source Performance (%) = $[(B - D)/B] \times 100$	
	F. Exempt Periods (as applicable) - F(x)(3 hour periods)	

F1 = Startup/Shutdown

F2 = Load Change

- G. Net Excess Emissions = $D \sum F(x)(3 \text{ hour periods})$
- H. Net Source Performance (%) H(x):

=
$$[1 - (G(x)/(B - \sum F(x)))] \times 100$$

$$= [(B - \sum F(x) - G(x))/(B - \sum F(x))] \times 100$$

- I. Overall Exceedances (%) Percent of time above the standard due to all reasons:
 - = 100-E
- J. Net Exceedances (%) Percent of time above the standard due to non-exempt reasons:
 - = 100-H
- K. Exempt Period Exceedances (%) Percent of time above the standard due to an exempted reason

$$SU/SD = (F_1/B) \times 100$$

Load Change =
$$(F_2/B) \times 100$$

- * Information identifying each period during which the monitoring systems were inoperative (except for zero and span checks) and the nature of the system repairs or adjustments will be maintained and made available upon request.
- ** Report date, time duration, magnitude, cause and corrective action taken for each occurrence. NO_X emissions rate (lb/MMBtu) will be computed as a 3-hour rolling average.

NOTE: Data recorded during periods of system breakdowns, repairs, adjustments, and calibration checks shall not be included in any of the above data averages.

Acid Rain Requirements

1. This unit is subject to the Acid Rain Rules contained in Rule 335-3-18 and 40 CFR Part 72, 73, and 75. The applicable Acid Rain Permit is contained in the Acid Rain portion of this Operating Permit.

Rule 335-3-18 and 40 CFR Parts 72, 73, and 75

CAIR Requirements

1. This unit is subject to the CAIR Rules contained in Rule 335-3-5 and Rule 335-3-8 and 40 CFR Parts 59 and 97. The applicable CAIR Permit is contained in the CAIR portion of this Operating Permit.

Rule 335-3-5, Rule 335-3-8, and 40 CFR Parts 59 and 97

Summary Page for Two (2) 220 MMbtu/hr Natural Gas Fired Boilers

Permitted Operating Schedule: 8760 Hrs/yr

Emission limitations:

Emission Point #	Description	Pollutant	Emission limit	Regulation
			Each Boiler	
002, 003	220 MMBtu/hr Natural Gas Fired Boiler	PM	0.02 lb/MMBtu and 1.1 lb/hr*	ADEM Admin. Code r. 335-3-1404(9)(b) BACT
-			0.008 lb/MMBtu and 1.7 lb/hr**	
002, 003	220 MMBtu/hr Natural Gas Fired Boiler	NOx	0.11 lb/MMBtu and 6.1 lb/hr*	ADEM Admin. Code r. 335-3-1404(9)(b) BACT
			0.053 lb/MMBtu and 11.7 lb/hr**	
			0.20 lb/MMBtu	40 CFR Part 60 Subpart Db
002, 003	220 MMBtu/hr Natural Gas Fired Boiler	SO ₂	N/A	N/A
002, 003	220 MMBtu/hr Natural Gas Fired Boiler	СО	0.32 lb/MMBtu and 17.6 lb/hr*	ADEM Admin. Code r. 335-3-1404(9)(b) BACT
* * ***********************************	A DESCRIPTION OF THE PROPERTY		0.165 lb/MMBtu and 36.3 lb/hr**	
002, 003	220 MMBtu/hr Natural Gas Fired Boiler	VOC	0.02 lb/MMBtu and 1.1 lb/hr*	ADEM Admin. Code r. 335-3-1404(9)(b) BACT
And the second s			0.005 lb/MMBtu and 1.1 lb/hr**	i sact
002, 003	220 MMBtu/hr Natural Gas Fired Boiler	HAPs	N/A	N/A
002, 003	220 MMBtu/hr Natural Gas Fired Boiler	Opacity	15%	ADEM Admin. Code r. 335-3-1404(9)(b)

^{*} limits at low load conditions (below 55 MMBtu/hr)

^{**} limits at higher load conditions (greater than or equal to 55 MMBtu/hr)

Provisos for Two (2) 220 MMbtu/hr Natural Gas Fired Boilers

Fe	ederally Enforceable Provisos	Regulations
A	pplicability	
1.	These sources are subject to the applicable requirements of ADEM Admin. Code R. 335-3-16, "Major Source Operating Permits".	Rule 335-3-16
2.	These sources are subject to the applicable requirements of ADEM Admin. Code R. 335-3-1404, "Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]."	Rule 335-3-1404
3.	These boilers are subject to the applicable requirements of ADEM Admin. Code r. 335-3-1002(2)(b), 40 CFR 60 Subpart Db "Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units."	Rule 335-3-1002(2)(b) 40 CFR Part 60 Subpart Db
<u>Er</u>	nission Standards	
1.	The two package boilers shall fire only natural gas.	Rule 335-3-1404
2.	Particulate matter emissions from each of the units shall not exceed 0.02 lb/MMBtu and 1.1 lb/hr when operating at a heat input less than 55 MMBtu/hr or 0.008 lb/MMBtu and 1.7 lb/hr when operating at a heat input greater than or equal to 55 MMBtu/hr.	Rule 335-3-1404(9)(b) BACT
3.	Nitrogen Oxide emissions from each of the units shall not exceed 0.11 lb/MMBtu and 6.1 lb/hr when operating at a heat input less than 55 MMBtu/hr or 0.053 lb/MMBtu and 11.7 lb/hr when operating at a heat input greater than or equal to 55 MMBtu/hr.	Rule 335-3-1404(9)(b) BACT
4.	Nitrogen Oxide emissions from each of the units shall not exceed 0.20 lb/MMBtu and 44 lb/hr.	40 CFR 60.44b(h)
5.	Carbon Monoxide emissions from each of the units shall not exceed 0.32 lb/MMBtu and 17.6 lb/hr when operating at a heat input less than 55 MMBtu/hr or 0.165 lb/MMBtu and 36.3 lb/hr when operating at a heat input greater than or equal to 55 MMBtu/hr.	Rule 335-3-1404(9)(b) BACT
6.	Volatile Organic Compound emissions from each of the units shall not exceed 0.02 lb/MMBtu and 1.1 lb/hr when operating at a heat input less than 55 MMBtu/hr or 0.005 lb/MMBtu and 1.1 lb/hr when operating at a heat input greater than or equal to 55 MMBtu/hr.	Rule 335-3-1404(9)(b) BACT
7.	Visible emissions shall not exceed 15% opacity.	Rule 335-3-1404(9)(b)

Federally Enforceable Provisos		Regulations
8.	The emissions standards in Provisos 2 – 7 above apply at all times except during periods of startup, shutdown, and load change.	Rule 335-3-1403(1)(h)
<u>Co</u>	mpliance and Performance Test Methods and Procedures	
1.	Compliance with the Nitrogen Oxides emissions standards shall be determined by EPA Reference Method 7 or 7E as found in Appendix A of 40 CFR 60.	Rule 335-3-105
2.	Compliance with the Carbon Monoxide emissions standards shall be determined by EPA Reference Method 10 as found in Appendix A of 40 CFR 60.	Rule 335-3-105
3.	Compliance with the Volatile Organic Compounds emissions standards shall be determined by EPA Reference Method 25, 25A, or 25B, as found in Appendix A of 40 CFR 60.	Rule 335-3-105
4.	Compliance with the particulate emissions standards shall be determined by EPA Reference Method 5 or 17, as found in Appendix A of 40 CFR 60.	Rule 335-3-105
5.	Compliance with the opacity standards shall be determined by EPA Reference Method 9 as found in Appendix A of 40 CFR 60.	Rule 335-3-105
<u>E</u> 1	mission Monitoring	
1.	All testing requirements shall be demonstrated during separate conditions where the boilers operate at low load conditions of less than 55 MMBtu/hr and at high loads of approx. 220 MMBtu/hr.	Rule 335-3-1404
2.	This source is subject to the applicable requirements of 40 CFR Part 64, "Compliance Assurance Monitoring" to include the Operation of approved monitoring as detailed in §64.7. This monitoring shall begin upon the issuance of this permit and shall be conducted in accordance with the attached Appendix.	40 CFR Part 64 – CAM
3.	If the Permittee is required by the Administrator to develop and implement a Quality Improvement Plan (QIP), it shall do so as specified in 40 CFR Part 64.8.	40 CFR Part 64 - CAM
4.	The NOx emission rate from this unit shall be monitored by the NOx Continuous Emissions Monitoring (CEMS). The NOx emission rate shall be monitored on a rolling thirty-day average. The NOx CEMS shall be maintained and certified using the procedures of 40 CFR 60 Subpart Db.	Rule 335-3-1605(c)
•		40 CFR Part 60 Subpart Db
		40 CFR Part 64 - CAM

Federally Enforceable Provisos	Regulations
Recordkeeping and Reporting Requirements	
1. This source is subject to the applicable requirements of 40 CFR Part 64, "Compliance Assurance Monitoring" to include the Reporting and Recordkeeping Requirements in §64.9.	40 CFR Part 64.9
2. Within 30 days after the end of each calendar quarter, the permittee will submit an excess NO_x emissions report (EER) to the Department. This report shall contain all the applicable information required by 40 CFR 60.49b.	40 CFR 60.49b

Compliance Assurance Monitoring (CAM) Plans

Theodore Cogeneration Compliance Assurance Monitoring Combustion Turbine, Duct Burner & HRSG SCR for NOx Emission Control

Submittal Reference	Monitoring Design Criteria Reference	Monitoring Design Requirement	Monitoring Approach
64.4 (a)(1)	64.3 (a)(1)	Indicator of Emission Control Performance	NOx emission rate in lbs/mmBtu is the indicator of SCR performance.
64.4 (a)(2)	64.3 (a)(2)	Designated Indicator Condition that provides reasonable assurance of ongoing compliance	A NOx emission rate of 0.013 lb/mmBtu monitored using a rolling 3-hour average computed by CEMS is the designated indicator condition that provides reasonable assurance of ongoing compliance.
64.4 (a)(3)	64.3 (b)	Performance Criteria: (1) Obtain Representative Data (2) Verify Operational Status (3) Establish QA/QC Practices (4) Set Frequency of Data Collection and the Exceedance Averaging Period	accordance with 40 CFR 60, Appendix A. The NOx concentration of the exhaust gas sample is measured by the NOx CEMS analyzer in ppmv. The NOx concentration is converted to lb/mmBtu and recorded by the CEMS DAHS. (2) The initial testing and certification procedures in 40 CFR 75, Appendix A and the performance protocol (PS2) in 40 CFR 60, Appendix B were used to verify the CEMS operational status. (3) The QA/QC practices that ensure continuing validity of the data are included in the plant's Quality Assurance Plan (QAP) in accordance with 40 CFR 75. (4) Data is collected continuously and a rolling 3-hour average is computed by the CEMS DAHS to determine whether an exceedance has occurred.
64.4 (a)(4)	64.3 (d)	Special Criteria for the use of CEMS	Air Permit No. 503-8073-X001, condition 17, requires monitoring of the NOx emission rate on a 3-hour rolling average by CEMS. The CEMS allows for the reporting of exceedances as required by Air Permit No. 503-8073-X001, condition 25.
64.4 (b)	64.3 (d)	Justification of Monitoring Approach/ Explanation of Monitoring Applicability	By stating that the NOx emission rate shall not exceed 0.013 lb/mmBtu and by requiring monitoring using a 3-hour rolling average as computed by CEMS, Air Permit No. 503-8073-X001, condition 17 justifies designating the NOx emission rate of 0.013 lb/mmBtu monitored using a rolling 3-hour average computed by the CEMS as the monitoring approach that provides reasonable assurance of ongoing compliance.
64.4 (c)		Control Device Performance Testing	Performance testing was conducted in accordance with 40 CFR 60. The test report was provided to ADEM on February 16, 2001. No changes that could result in a significant change in unit or SCR performance have been made since conducting the performance testing.

Theodore Cogeneration Compliance Assurance Monitoring Steam Boilers 1 & 2 Flue Gas Recirculation (FGR) for NOx Emission Control

Submittal Reference	Monitoring Design Criteria Reference	Monitoring Design Requirement	Monitoring Approach
64.4 (a)(1)	64.3 (a)(1)	Indicator of Emission Control Performance	NOx emission rate in lbs/mmBtu is the indicator of SCR performance.
64.4 (a)(2)	64.3 (a)(2)	Designated Indicator Condition that provides reasonable assurance of ongoing compliance	For operations < 55 mmBtu/hr, a NOx emission rate of 0.011lb/mmBtu monitored using a 30-day rolling average computed by CEMS is the designated indicator condition that provides reasonable assurance of ongoing compliance. For operation >=55 mmBtu/hr, a NOx emission rate of 0.053 lb/mmBtu monitored using a 30-day rolling average computed by CEMS is the designated indicator condition that provides reasonable assurance of ongoing compliance.
64.4 (a)(3)	64.3 (b)	Performance Criteria: (5) Obtain Representative Data (6) Verify Operational Status (7) Establish QA/QC Practices (8) Set Frequency of Data Collection and the Exceedance Averaging Period	 The exhaust gas is continuously sampled by a probe located in the stack of each unit in accordance with 40 CFR 60, Appendix A. The NOx concentration of the exhaust gas sample is measured by the NOx CEMS analyzer in ppmv. The NOx concentration is converted to lb/mmBtu and recorded by the CEMS DAHS. The initial testing and certification procedures in 40 CFR 75, Appendix A and the performance protocol (PS2) in 40 CFR 60, Appendix B were used to verify the CEMS operational status. The QA/QC practices that ensure continuing validity of the data are included in the plant's Quality Assurance Plan (QAP) in accordance with 40 CFR 75. Data is collected continuously and a rolling 3-hour average is computed by the CEMS DAHS to determine whether an exceedance has occurred.
64.4 (a)(4)	64.3 (d)	Special Criteria for the use of CEMS	40 CFR 60 subpart DB requires monitoring of the NOx emission rate on a 30-day rolling average by CEMS.
64.4 (b)	64.3 (d)	Justification of Monitoring Approach/ Explanation of Monitoring Applicability	For operations < 55 mmBtu/hr, 40CFR 60 Subpart Db justifies designating the NOx emission rate of 0.011 lb/mmBtu monitored on a 30-day rolling average by CEMS as the monitoring approach that provides reasonable assurance of ongoing compliance. For operations >=55 mmBtu/hr, 40CFR 60 Subpart DB justifies designating the NOx emission rate of 0.053 lb/mmBtu monitored on a 30-day rolling average by CEMS as the monitoring approach that provides reasonable assurance of ongoing compliance.
64.4 (c)		Control Device Performance Testing	Performance testing was conducted in accordance with 40 CFR 60 Appendix A. A test report was provided to ADEM on December 13, 1999 and a re-test report for steam boiler 2 at high load was provided to ADEM on January 16, 2000. No changes that could result in a significant change in unit or FGR performance have been made since conducting the performance testing.



Acid Rain Permit Application

For more information, see instructions and 40 CFR 72.30 and 72.31.

This submission is: new revised X for Acid Rain permit renewal

STEP 1

Identify the facility name, State, and plant (ORIS) code.

Facility (Source) Name Theodore Cogeneration	State AL	Plant Code 7721

STEP 2

Enter the unit ID# for every affected unit at the affected source in column "a."

a	b
Unit ID#	Unit Will Hold Allowances in Accordance with 40 CFR 72.9(c)(1)
CC1	Yes
	Yes

Permit Requirements

STEP 3

Read the standard requirements.

(1) The designated representative of each affected source and each affected unit at the source shall:

(i) Submit a complete Acid Rain permit application (including a compliance plan) under 40 CFR part 72 in accordance with the deadlines specified in 40 CFR 72.30; and

(ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain permit application and issue or deny an Acid Rain permit;

(2) The owners and operators of each affected source and each affected unit at the source shall:

(i) Operate the unit in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the permitting authority; and

(ii) Have an Acid Rain Permit.

Monitoring Requirements

- (1) The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75
- (2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the source or unit, as appropriate, with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
- (3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

Sulfur Dioxide Requirements

- (1) The owners and operators of each source and each affected unit at the source shall:
 - (i) Hold allowances, as of the allowance transfer deadline, in the source's compliance account (after deductions under 40 CFR 73.34(c)), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the affected units at the source; and
 - (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
- (2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
- (3) An affected unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
 - (i) Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2); or (ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3).

Sulfur Dioxide Requirements, Cont'd.

STEP 3, Cont'd.

(4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.

(5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to

the calendar year for which the allowance was allocated.

(6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.

(7) An allowance allocated by the Administrator under the Acid Rain

Program does not constitute a property right.

Nitrogen Oxides Requirements

The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

Excess Emissions Requirements

- (1) The designated representative of an affected source that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.
- (2) The owners and operators of an affected source that has excess emissions in any calendar year shall:
 - (i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
 - (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

Recordkeeping and Reporting Requirements

- (1) Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:
 - (i) The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the

submission of a new certificate of representation changing the designated representative;

Recordkeeping and Reporting Requirements, Cont'd. STEP 3, Cont'd.

(ii) All emissions monitoring information, in accordance with 40 CFR part 75, provided that to the extent that 40 CFR part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply.

(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain

Program; and,

(iv) Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain

Program.

(2) The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

Liability

(1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.

(2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C.

1001.

(3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.

(4) Each affected source and each affected unit shall meet the

requirements of the Acid Rain Program.

(5) Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated representative of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source.

(6) Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit.

(7) Each violation of a provision of 40 CFR parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Effect on Other Authorities

No provision of the Acid Rain Program, an Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 shall be construed as:

(1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating

STEP 3, Cont'd.

Effect on Other Authorities, Cont'd.

to applicable National Ambient Air Quality Standards or State Implementation Plans;

(2) Limiting the number of allowances a source can hold; *provided*, that the number of allowances held by the source shall not affect the source's obligation to comply with any other provisions of the Act;

(3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements

under such State law;

(4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,

(5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

STEP 4
Read the certification statement, sign, and date.

Certification

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name Anthony J. Marino	
Signature Mothing of Manns	Date 6/28/2010
oignatare Company	

Phase II Acid Rain Permit

Alabama Department of Environmental Management Issued by:

Alabama Power Company - Theodore Cogeneration Issued to:

Plant

Operated by: Alabama Power Company

7721 ORIS Code:

Draft through Draft Effective:

Acid Rain Permit Contents

Statement of Basis 1)

- SO₂ allowances allocated under this permit and NO_x requirements 2) for each affected unit.
- Comments, notes and justifications regarding permit decisions and 3) changes made to the permit application forms during the review process and any additional requirements or conditions.
- The Phase II Permit Application submitted for this source. The 4) owners and operators of the source must comply with the standard requirements and special provisions set forth in the Phase II Permit Application.
- Summary of Previous Actions and Current Action. 5)

1) Statement of Basis:

Statutory and Regulatory Authorities: In accordance with the Code of Alabama 1975, §§ 22-22A-4, 22-22A-6, 22-22A-8, 22-28-14, and Titles IV and V of the Clean Air Act, the Alabama Department of Environmental Management issues this permit pursuant to ADEM Admin. Codes 335-3-16 and 335-3-18.

2) SO₂ Allowance Allocations and NO_x Requirements for each affected unit:

		2011	2012	2013	2014	2015
CC1	SO ₂ allowances, under 40 CFR part 73 [tons]	NA¹	NA¹	NA¹	NA¹	NA¹
	NO _x limit [lb/MMBtu]	¤2	¤2	¤2	¤2	¤2

- 1 The number of allowances allocated to Phase II affected units by U.S. EPA may change under 40 CFR Part 73. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U.S. EPA. Neither of the aforementioned conditions necessitate a revision to SO₂ allowance allocations identified in this permit [See 40 CFR 72.84].
- 2 40 CFR Part 76 does not establish a NOx emission rate for Combined Cycle Combustion Turbine Unit CC1.
- Comments, Notes, and Justifications: This facility consists of a combined cycle 170 MW Natural Gas Fired Combustion Turbine with a Natural Gas Fired 115 MMBtu/hr Duct Burner and Heat Recovery Steam Generator and 2 220 MMBtu/hr Natural Gas Fired Boilers. The Heat Recovery Steam Generator supplies steam to two nearby industrial facilities and a 40 MW steam turbine. The two natural gas fired boilers also supply steam to the two industrial facilities. The two natural gas fired boilers are not used for electric generation and are not affected units under Acid Rain.

It should be noted that the compliance certification report shall cover each calendar year in which year the unit is subject to an Acid Rain limitation.

4) Phase II Permit Application: Attached.

5) Summary of Previous Actions and Current Action:

	Action	Date
1.	Draft permit prepared and submitted for public review and comment.	May 24, 2000
2.	Permit finalized and issued.	June 29, 2000
3.	Permit revised for an administrative permit amendment to include actual dates for commencement of operation and monitor certification.	September 28, 2001
4.	Draft permit renewal prepared and submitted for public review and comment.	November 25, 2005
5.	Renewal permit finalized and issued.	January 3, 2006
6.	Draft permit renewal prepared and submitted for public review and comment.	Draft
7.	Renewal permit finalized and issued.	Draft
	Ronald W. Gore, Chief Air Division	Date



EM CAIR Permit Application

(for sources covered under a CAIR SIP)

For more information, please refer to ADEM Admin. Code chapters 335-3-5 and 335-3-8

Identify the source by plant name, State, and ORIS or facility code

This submission is: [X] New Revised			
Theodore Cogeneration	AL	7721	
Plant Name	State	ORIS/Facility Code	

STEP 2 Enter the unit ID# for each CAIR unit and indicate to which CAIR programs each unit is subject (by placing an "X" in the column)

Unit ID#	NO _x Annual	SO ₂	NO _x Ozone Season
CC1	X	X	X
	<u> </u>		

STEP 3 Read the standard requirements and the certification, enter the name of the CAIR designated representative, and sign and date

Standard Requirements

(a) Permit Requirements.

- (1) The CAIR designated representative of each CAIR NO_X source, CAIR SO₂ source, and CAIR NO_X Ozone Season source (as applicable) required to have a title V operating permit or synthetic minor operating permit and each CAIR NOx unit, CAIR SO2 unit, and CAIR NOx Ozone Season unit (as applicable) required to have a title V operating permit or synthetic minor operating permit at the source shall:
- (i) Submit to the Department a complete CAIR permit application under rules 335-3-5-.08, 335-3-8-18(3), and 335-3-8-.27(3) (as applicable); and
- (ii) Submit in a timely manner any supplemental information that the Department determines is necessary in order to review a CAIR permit application and issue or deny a CAIR permit.
- (2) The owners and operators of each CAIR NO_x source, CAIR SO₂ source, and CAIR NO_x Ozone Season source (as applicable) required to have a title V operating permit or synthetic minor operating permit and each CAIR NOx unit, CAIR SO₂ unit, and CAIR NO_X Ozone Season unit (as applicable) required to have a title V operating permit or synthetic minor operating permit at the source shall have a CAIR permit issued by the Department under rules 335-3-5-.08, 335-3-8-.18, and 335-3-8-.27 (as applicable) for the source and operate the source and the unit in compliance with such CAIR permit.

Theodore Cogeneration

Plant Name (from Step 1)

STEP 3, continued

(b) Monitoring, reporting, and recordkeeping requirements.

- (1) The owners and operators, and the CAIR designated representative, of each CAIR NO_X source, CAIR SO_2 source, and CAIR NO_X Ozone Season source (as applicable) and each CAIR NO_X unit, CAIR SO_2 unit, and CAIR NO_X Ozone Season unit (as applicable) at the source shall comply with the monitoring, reporting, and recordkeeping requirements of rules 335-3-5-.13, 335-3-8-.23, and 335-3-8-.32 (as applicable).
- (2) The emissions measurements recorded and reported in accordance with rules 335-3-5-.13, 335-3-8-.23, and 335-3-8-.32 (as applicable) shall be used to determine compliance by each CAIR NO_X source, CAIR NO_X source, and CAIR NO_X Ozone Season source (as applicable) with the CAIR NO_X emissions limitation, CAIR NO_X emissions limitation, and CAIR NO_X Ozone Season emissions limitation (as applicable) under subparagraph (c) of rules 335-3-5-.06(6), 335-3-8-.16(6), 335-3-8-.25(6) (as applicable).

(c) Nitrogen oxides emissions requirements.

- (1) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR NO_x source and each CAIR NO_x unit at the source shall hold, in the source's compliance account, CAIR NO_x allowances available for compliance deductions for the control period under rule 335-3-8-.21(5)(a) in an amount not less than the tons of total nitrogen oxides emissions for the control period from all CAIR NO_x units at the source, as determined in accordance with rule 335-3-8-.23.
- (2) A CAIR NO_X unit shall be subject to the requirements under subparagraph (c)1. of rule 335-3-8-.16(6) for the control period starting on the later of January 1, 2009 or the deadline for meeting the unit's monitor certification requirements under rule 335-3-8-.23(1)(b)1., 2., or 5. and for each control period thereafter.
- (3) A CAIR NO_x allowance shall not be deducted, for compliance with the requirements under subparagraph (c)1. of 335-3-8-.16(6), for a control period in a calendar year before the year for which the CAIR NO_x allowance was allocated.
- (4) CAIR NO_X allowances shall be held in, deducted from, or transferred into or among CAIR NO_X Allowance Tracking System accounts in accordance with rules 335-3-8-.21, 335-3-8-.22, and 335-3-8-.24.
- (5) A CAIR NO_x allowance is a limited authorization to emit one ton of nitrogen oxides in accordance with the CAIR NO_x Annual Trading Program. No provision of the CAIR NO_x Annual Trading Program, the CAIR permit application, the CAIR permit, or an exemption under rule 335-3-8-.16(5) and no provision of law shall be construed to limit the authority of the State or the United States to terminate or limit such authorization.
 - (6) A CAIR NO_x allowance does not constitute a property right.
- (7) Upon recordation by the Administrator under rule 335-3-8-.20, 335-3-8-.21, 335-3-8-.22, or 335-3-8-.24, every allocation, transfer, or deduction of a CAIR NO_x allowance to or from a CAIR NO_x source's compliance account is incorporated automatically in any CAIR permit of the source that includes the CAIR NO_x unit.
- Sulfur dioxide emission requirements.

 (1) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR SO₂ source and each CAIR SO₂ unit at the source shall hold, in the source's compliance account, a tonnage equivalent of CAIR SO₂ allowances available for compliance deductions for the control period under rule 335-3-5-.11(5)(a) and (b) not less than the tons of total sulfur dioxide emissions for the control period from all CAIR SO₂ units at the source, as determined in accordance with rule 335-3-5-13.
- (2) A CAIR SO₂ unit shall be subject to the requirements under subparagraph (c)1. of rule 335-3-5-.06(6) for the control period starting on the later of January 1, 2010 or the deadline for meeting the unit's monitor certification requirements under rule 335-3-5-.13(1)(b)1., 2., or 5. and for each control period thereafter.
- (3) A CAIR SO_2 allowance shall not be deducted, for compliance with the requirements under subparagraph (c)1. of rule 335-3-5-06(6), for a control period in a calendar year before the year for which the CAIR SO_2 allowance was allocated.
- (4) CAIR SO₂ allowances shall be held in, deducted from, or transferred into or among CAIR SO₂ Allowance Tracking System accounts in accordance with rules 335-3-5-.11, 335-3-5-.12, and 335-3-5-.14.
- $^{\circ}$ (5) A CAIR SO₂ allowance is a limited authorization to emit sulfur dioxide in accordance with the CAIR SO₂ Trading Program. No provision of the CAIR SO₂ Trading Program, the CAIR permit application, the CAIR permit, or an exemption under rule 335-3-5-.06(5) and no provision of law shall be construed to limit the authority of the State or the United States to terminate or limit such authorization.
 - (6) A CAIR SO₂ allowance does not constitute a property right.
- (7) Upon recordation by the Administrator under rules 335-3-5-.11, 335-3-5-.12, and 335-3-5-.14, every allocation, transfer, or deduction of a CAIR SO₂ allowance to or from a CAIR SO₂ source's compliance account is incorporated automatically in any CAIR permit of the source that includes the CAIR SO₂ unit. Nitrogen oxides ozone season emissions requirements.
- (1) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR NO_X Ozone Season source and each CAIR NO_X Ozone Season unit at the source shall hold, in the source's compliance account, CAIR NO_X Ozone Season allowances available for compliance deductions for the control period under rule 335-3-8-.30(5)(a) in an amount not less than the tons of total nitrogen oxides emissions for the control period from all CAIR NO_X Ozone Season units at the source, as determined in accordance with rule 335-3-8-.32.
- (2) A CAIR NO_X Ozone Season unit shall be subject to the requirements under subparagraph (c)1. of rule 335-3-8-.25(6) for the control period starting on the later of May 1, 2009 or the deadline for meeting the unit's monitor certification requirements under rule 335-3-8-.32(1)(b)1., 2., 3. or 7. and for each control period thereafter.
- (3) A CAIR NO_x Ozone Season allowance shall not be deducted, for compliance with the requirements under subparagraph (c)1. of rule 335-3-8-.25(6), for a control period in a calendar year before the year for which the CAIR NO_x Ozone Season allowance was allocated.
- (4) CAIR NO_X Ozone Season allowances shall be held in, deducted from, or transferred into or among CAIR NO_X Ozone Season Allowance Tracking System accounts in accordance with rules 335-3-8-.30, 335-3-8-.31, and 335-3-8-.33.
- (5) A CAIR NO_x allowance is a limited authorization to emit one ton of nitrogen oxides in accordance with the CAIR NO_x Ozone Season Trading Program. No provision of the CAIR NO_x Ozone Season Trading Program, the CAIR permit application, the CAIR permit, or an exemption under rule 335-3-8-.25(5) and no provision of law shall be construed to limit the authority of the State or the United States to terminate or limit such authorization.
 - (6) A CAIR NO_X allowance does not constitute a property right.
- (7) Upon recordation by the Administrator under rule 335-3-8-.29. 335-3-8-.30, 335-3-8-.31, or 335-3-8-.33, every allocation, transfer, or deduction of a CAIR NO_x Ozone Season allowance to or from a CAIR NO_x Ozone Season source's compliance account is incorporated automatically in any CAIR permit of the source.

Theodore Cogeneration Plant Name (from Step 1)

STEP 3, continued

(d) Excess emissions requirements.

- If a CAIR NO_x source emits nitrogen oxides during any control period in excess of the CAIR NO_x emissions limitation, then:
- (1) The owners and operators of the source and each CAIR NO_X unit at the source shall surrender the CAIR NO_X allowances required for deduction under 335-3-8-.21(5)(d)1. and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable State law; and
- (2) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of this subpart, the Clean Air Act, and applicable State law.

If a CAIR SO₂ source emits sulfur dioxide during any control period in excess of the CAIR SO₂ emissions limitation, then:

- (1) The owners and operators of the source and each CAIR SO₂ unit at the source shall surrender the CAIR SO₂ allowances required for deduction under rule 335-3-5-.11(5)(d)1. and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable State law; and
- (2) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of this subpart, the Clean Air Act, and applicable State law.

If a CAIR NO_x Ozone Season source emits nitrogen oxides during any control period in excess of the CAIR NO_x Ozone Season emissions limitation, then:

- (1) The owners and operators of the source and each CAIR NO_x Ozone Season unit at the source shall surrender the CAIR NO_x Ozone Season allowances required for deduction under rule 335-3-8-30(5)(d)1. and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable State law: and
- (2) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of this subpart, the Clean Air Act, and applicable State law.

(e) Recordkeeping and Reporting Requirements.

- (1) Unless otherwise provided, the owners and operators of the CAIR NO_x source, CAIR SO₂ source, and CAIR NO_x Ozone Season source (as applicable) and each CAIR NO_x unit, CAIR SO₂ unit, and CAIR NO_x Ozone Season unit (as applicable) at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the permitting authority or the Administrator.
- (i) The certificate of representation under rules 335-3-5-.07(4), 335-3-8-.17(4) and 335-3-8-.26(4) (as applicable) for the CAIR designated representative for the source and each CAIR NO_x unit, CAIR SO₂ unit, and CAIR NO_x Ozone Season unit (as applicable) at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation under rules 335-3-5-.07(4), 335-3-8-.17(4) and 335-3-8-.26(4) (as applicable) changing the CAIR designated representative.
- (ii) All emissions monitoring information, in accordance with rules 335-3-5-.13, 335-3-8-.23, and 335-3-8-.32 (as applicable), provided that to the extent that rules 335-3-5-.13, 335-3-8-.23, and 335-3-8-.32 (as applicable) provides for a 3-year period for recordkeeping, the 3-year period shall apply.
- (iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the CAIR NO_X Annual Trading Program, CAIR SO₂ Trading Program, and CAIR NO_X Ozone Season Trading Program (as applicable).
- (iv) Copies of all documents used to complete a CAIR permit application and any other submission under the CAIR NO_X Annual Trading Program, CAIR SO₂ Trading Program, and CAIR NO_X Ozone Season Trading Program (as applicable) or to demonstrate compliance with the requirements of the CAIR NO_X Annual Trading Program, CAIR SO₂ Trading Program, and CAIR NO_X Ozone Season Trading Program (as applicable).
- (2) The CAIR designated representative of a CAIR NO_X source, CAIR SO₂ source, and CAIR NO_X Ozone Season source (as applicable) and each CAIR NO_X unit, CAIR SO₂ unit, and CAIR NO_X Ozone Season unit (as applicable) at the source shall submit the reports required under the CAIR NO_X Annual Trading Program, CAIR SO₂ Trading Program, and CAIR NO_X Ozone Season Trading Program (as applicable) including those under rules 335-3-5-.13, 335-3-8-.23, and 335-3-8-.32 (as applicable).

(f) Liability.

- (1) Each CAIR NO_X source, CAIR SO₂ source, and CAIR NO_X Ozone Season source (as applicable) and each NO_X unit, CAIR SO₂ unit, and CAIR NO_X Ozone Season unit (as applicable) shall meet the requirements of the CAIR NO_X Annual Trading Program, CAIR SO₂ Trading Program, and CAIR NO_X Ozone Season Trading Program (as applicable).
- (2) Any provision of the CAIR NO_x Annual Trading Program, CAIR SO₂ Trading Program, and CAIR NO_x Ozone Season Trading Program (as applicable) that applies to a CAIR NO_x source, CAIR SO₂ source, and CAIR NO_x Ozone Season source (as applicable) or the CAIR designated representative of a CAIR NO_x source, CAIR SO₂ source, and CAIR NO_x Ozone Season source (as applicable) shall also apply to the owners and operators of such source and of the CAIR NO_x units, CAIR SO₂ units, and CAIR NO_x Ozone Season units (as applicable) at the source.
- (3) Any provision of the CAIR NO_X Annual Trading Program, CAIR SO_2 Trading Program, and CAIR NO_X Ozone Season Trading Program (as applicable) that applies to a CAIR NO_X unit, CAIR SO_2 unit, and CAIR NO_X Ozone Season unit (as applicable) or the CAIR designated representative of a CAIR NO_X unit, CAIR SO_2 unit, and CAIR NO_X Ozone Season unit (as applicable) shall also apply to the owners and operators of such unit.

Theodore Cogeneration

Plant Name (from Step 1)

STEP 3, continued

(g) Effect on Other Authorities.

No provision of the CAIR NO_X Annual Trading Program, CAIR SO_2 Trading Program, and CAIR NO_X Ozone Season Trading Program (as applicable), a CAIR permit application, a CAIR permit, or an exemption under rules 335-3-5-.06(5), 335-3-8-.16(5), and 335-3-8-.25(5) (as applicable) shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a CAIR NO_X source, CAIR SO_2 source, and CAIR NO_X Ozone Season source (as applicable) or CAIR NO_X unit, CAIR SO_2 unit, and CAIR NO_X Ozone Season unit (as applicable) from compliance with any other provision of the applicable, approved State implementation plan, a federally enforceable permit, or the Clean Air Act.

Certification

I am authorized to make this submission on behalf of the owners and operators of the source or units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name	Willard L. Bowers	
Signatur	· Willed & am	Date 6/26/07

CAIR NO_x Annual Trading Program Permit

Issued by:

Alabama Department of Environmental Management

Issued to:

Alabama Power Company - Theodore Cogeneration

Plant

Operated by:

Alabama Power Company

ORIS Code:

7721

Effective:

DRAFT through DRAFT

- 1. This permit automatically incorporates the definition of terms under ADEM Admin. Code r. 335-3-8-.16(2).
- 2. This permit records automatically, upon recordation by the EPA Administrator in accordance with ADEM Admin. Code r. 335-3-8-.21, 335-3-8-.22, and 335-3-8-.24 every allocation, transfer, or deduction of a CAIR NO_X allowance to or from the compliance accounts of the CAIR NO_X Units covered by the permit or the overdraft account of the CAIR NO_X Source covered by the permit.
- 3. This permit incorporates the attached CAIR NO_x Permit application. The owners or operators of the source must comply with the standard requirements and special provisions set forth in the application.
- 4. This permit incorporates the following comments, notes and justifications regarding permit decisions and changes made to the permit application forms during the review process: NONE
- 5. Summary of Previous Actions and Current Action:

Action	Date
Draft permit prepared and submitted for public review and comment.	XXXX
Permit finalized and issued.	XXXX
Ronald W. Gore, Chief Air Division	ate

CAIR NO_x Ozone Season Trading Program Permit

Issued by: Alabama Department of Environmental Management
Issued to: Alabama Power Company – Theodore Cogeneration

Plant

Operated by: Alabama Power Company

ORIS Code: 7721

Effective: DRAFT through DRAFT

- 1. This permit automatically incorporates the definition of terms under ADEM Admin. Code r. 335-3-8-.25(2).
- 2. This permit records automatically, upon recordation by the EPA Administrator in accordance with ADEM Admin. Code r. 335-3-8-.30, 335-3-8-.31, and 335-3-8-.33 every allocation, transfer, or deduction of a CAIR NO_X Ozone Season allowance to or from the compliance accounts of the CAIR NO_X Ozone Season Units covered by the permit or the overdraft account of the CAIR NO_X Ozone Season Source covered by the permit.
- 3. This permit incorporates the attached CAIR NO_x Ozone Season Permit application. The owners or operators of the source must comply with the standard requirements and special provisions set forth in the application.
- 4. This permit incorporates the following comments, notes and justifications regarding permit decisions and changes made to the permit application forms during the review process: NONE
- 5. Summary of Previous Actions and Current Action:

Action	Date
Draft permit prepared and submitted for public review and comment.	XXXX
Permit finalized and issued.	XXXX
Ronald W. Gore, Chief Air Division	Date